

REMARKS

This amendment is responsive to the Office Action mailed July 5, 2005. In the Office Action, the U.S. Patent and Trademark Office (hereinafter "the Office") rejected Claims 19-23, 31, and 36 under 35 U.S.C. § 103(a) as being unpatentable over Camiade et al. (US 5,305,469) in view of Wood (US 3,299,358). Claims 25-30 and 32-35 were allowed. As indicated above, Claim 19 has been amended and Claim 37 has been added. Claims 19-23 and 25-37 are pending in the application.

Applicant has carefully considered the rejection of Claims 19-23, 31 and 36 and respectfully disagrees that Camiade and Wood can be combined, and even if combined, the respective disclosures do not render the claims obvious.

The Office cannot dispute that Camiade specifically teaches a modem having a transistor that operates in either one of two states: (1) a vigil state wherein the transistor acts as a detector in the reception of a signal, or (2) an active state wherein the transistor acts as an amplifier for the transmission of a signal. See, *e.g.*, Col. 2, lines 45-53 of Camiade. In fact, Camiade *teaches away* from a circuit construction in which a transistor is configured to operate as set forth in Claims 19-23, 31 and 36. As taught by Camiade, the two states are exclusive. See, *e.g.*, Col. 3, line 65, to Col. 4, line 10. Camiade does not provide any suggestion or motivation to modify the modem to operate in a state somewhere between the vigil and active states. Indeed, such operation would be contrary to the express teachings of Camiade. For example, Camiade discusses operating in the vigil state alone (see, *e.g.*, Col. 4, lines 61-68), and then explains operating in the active state alone (see, *e.g.*, Col. 5, lines 1-12). This pattern is repeated throughout Camiade's description, precisely because the disclosed modem is intended to operate only in one or the other of the two states. "The advantage of this circuit is that the transistor has

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only two states with respect to the matching of the antenna: the detector [vigil] state or the amplifier [active] state." (Camiade, Col. 6, lines 44-46).

With respect to Claim 19, the Office acknowledged that Camiade fails to teach "a transistor biased to be simultaneously operable as a reflection amplifier for reflectively amplifying the input signal, and as a detector for detecting an amplified input signal to generate the demodulated signal." In an effort to cure the deficient disclosure in Camiade, the Office cited Wood for its general teaching of Class B operation of a transistor. Specifically, the Office referred to Figure 3 of Wood and cited Col. 6, lines 14-27, which reads as follows:

After reflex amplification in the stages including transistors 110 and 122, the audio frequency modulation signal is recovered across emitter resistor 126 and carrier bypass capacitor 200, and is applied to the base of transistor 132 via resistor 170.

The stage including transistor 132 is biased for class B operation so that the modulation signal applied thereto is rectified as well as amplified therein. Armature coil 146 of relay is connected in the collector circuit of transistor 132. The collector of transistor 132 is also connected to the base of transistor 114 via capacitor 134. Coil 146 is shunted by diode 142 and capacitor 144 which aid in the operation of relay 138.

The foregoing passage, however, and indeed the entire disclosure of Wood does not suggest that the transistor taught by Camiade could (or even should) be operated in a manner so as to be simultaneously operable as a reflection amplifier for reflectively amplifying an input signal, and as a detector for detecting an amplified input signal to generate a demodulated signal, as claimed in Claim 19. At most, Wood teaches class B operation of a standard transistor.

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Notably, the circuit employed by Wood uses *reflex* amplifiers, which should not be confused with a *reflection* amplifier. A reflex amplifier is one that is used to amplify at two frequencies, usually intermediate and audio frequencies. A reflex circuit does not produce a regenerative effect, as shown in the present application. Class B operation of a reflex amplifier as taught by Wood is insufficient in itself to suggest a motivation to modify the modem taught by Camiade, especially when such modification is contrary to the teachings of Camiade.

The Office has not shown, and neither Wood nor Camiade suggests, that class B operation of a reflex amplifier as taught by Wood is applicable or even desirable in the circuit taught by Camiade. Camiade teaches away from such a combination of the references and Wood provides no motivation to contradict the teachings of Camiade.

Lacking any teaching of a transistor that is biased to be simultaneously operable as a reflection amplifier for reflectively amplifying an input signal, and as a detector for detecting an amplified input signal to generate a demodulated signal, the prior art has failed to anticipate or render obvious the subject matter of Claims 19-23, 31 and 36. Independent Claim 31 recites "a transistor biased to be simultaneously operable as a reflection amplifier for reflectively amplifying the input signal, and as a detector for detecting an amplified input signal to generate the demodulated signal, " which is shown above to be novel and nonobvious over the prior art. Similarly, for the reasons explained above, the Office has not stated a *prima facie* case of obviousness to reject independent Claim 36, which recites in part, a method comprising "the simultaneously executable steps of (a) biasing a transistor to be simultaneously operable as a reflection amplifier and as a detector; (b) receiving the input signal and reflectively amplifying the input signal in the transistor operating as the reflection amplifier to generate an amplified input signal; and (c) passing the amplified input signal through the transistor operating as the

detector in a non-linear mode to demodulate the amplified input signal and thereby generate a corresponding demodulated signal."

For at least the foregoing reasons, applicant submits that Claims 19-23, 31 and 36 are allowable over the prior art, including Camiade and Wood.

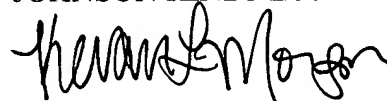
New Claim 37 has been added to recite the subject matter previously presented in Claim 24 and canceled from Claim 19. Claim 37 is patentable for its dependence on Claim 19 and for the additional subject matter recited therein. Similarly, Claims 20-23 are patentable for their dependence on Claim 19 and for the additional subject matter recited therein.

CONCLUSION

Applicant thanks the Examiner for the allowance of Claims 25-30 and 32-35. In view of the foregoing, applicant respectfully requests reconsideration of the application and allowance of Claims 19-23, 31, and 36 as well. Should any questions or comments remain, the Examiner is invited to contact the undersigned attorney at the telephone number indicated below.

Respectfully submitted,

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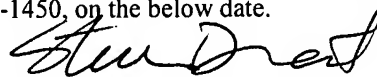


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